TERNARY PHOTOINITIATOR SYSTEM FOR CATIONICALLY POLYMERIZABLE RESINS

Abstract of the Disclosure

Photopolymerizable compositions comprise a cationically polymerizable resin and a photoinitiator system comprising: (i) an iodonium salt; (ii) a visible light sensitizer; and (iii) an electron donor compound having an oxidation potential less than that of 1,4-dimethoxybenzene when measured versus a saturated calomel electrode, wherein the photoinitiator system has a photoinduced potential of less than that of 3-dimethylaminobenzoic acid in a standard solution of $2.9x10^{-5}$ moles/g diphenyl iodonium hexafluoroantimonate and $1.5x10^{-5}$ moles/g camphorquinone in 2-butanone. The compositions polymerize on exposure to light in the visible spectrum and are useful in a variety of applications, including dental adhesives and dental composites.